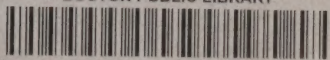


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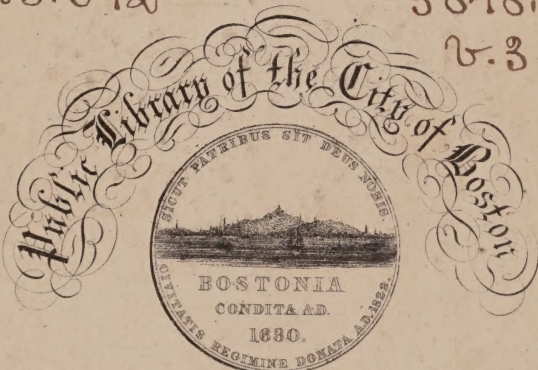
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Rev. William Dansey, A.M. D.D. LL.D.
Rector of Dorchester, St. Andrew's Church.

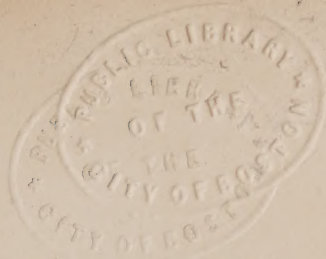
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v.3.



By Joshua Bates, Esq.
Received Sept. 20, 1856

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Vol. 3.



THE
BOTANICAL CABINET
Consisting of
Coloured Delineations
OF
Plants
from all Countries.

with a short Account of each,
Directions for Management &c. &c.

By
CONRAD LODDIGES & SONS

Vol. III
The Plates by
GEORGE COOKE.

"Even Solomon in all his glory
was not arrayed like one of these."

1818.

London: Published by John & Arthur Arch, Cornhill;
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25,042

Joshua Bates

Sept. 20, 1856



Crataegus arbutifolia.

No. 201.

CRATÆGUS ARBUTIFOLIA.

Class.	Order.
ICOSANDRIA	DIGYNIA.

.....

This rare plant flowered with us in the month of July last. It has a strong evergreen leaf, very glossy, and resembling the *Arbutus*, except that the edges are more sharply toothed. It is propagated by budding upon the common hawthorn, upon which it takes pretty well.

We have hitherto kept it in the greenhouse, but it is very probable that when it becomes more common it will endure our winters out of doors, as some of the few plants which we are acquainted with from the same country do. It is a native of California, whence it was brought by Mr. Menzies in 1796. Of the productions of that distant land little indeed is known, but we doubt not that at some future day enough will be discovered to enable the attentive mind,

“ To mark the matchless workings of the power
That shuts within its seed the future flower ;
Bids these in elegance of form excel,
In colour these, and those delight the smell ;
Sends nature forth, the daughter of the skies,
To dance on earth, and charm all human eyes.”



Cistus helianthemum fulgens.

G. Cooke, fecit.

No. 202.

CISTUS HELIANTHEMUM *fulgens*.

Class.

Order.

POLYANDRIA

MONOGYNIA.

.....

This beautiful variety was raised from seeds of the Helianthemum, a sort of Cistus which sports very much. It flowers abundantly during the summer, and if planted in a border extends itself two or three feet over. The original species is a native of Britain; it is readily propagated by cuttings, and will grow in any moderately light soil: two or three double varieties have lately been obtained, one of which is very nearly the same colour as the present.





Aconitum rostratum.

No. 203.

ACONITUM ROSTRATUM.

Class.	Order.
<i>POLYANDRIA</i>	<i>TRIGYNIA.</i>

.....

This is a native of the Alps of Switzerland; it flowers with us in July, and like the rest of the genus is a very ornamental hardy perennial. We raised our plant from seeds about two years ago: it may also be increased by the roots. These are a kind of tubers, thick at the top, which is the bud, and tapering downwards two or three inches in length. When planted in small pots they are very neat and ornamental, growing to about the height of two feet in loamy earth. If they are turned out into a border where the soil is rich, they will grow much larger.



Besleria melittifolia.

No. 204.

BESLERIA MELITTIFOLIA.

Class.

Order.

DIDYNAMIA

ANGIOSPERMIA.

This genus derives its name from Basil Besler of Nuremberg, author of Hortus Eystettensis, 1613. Our present plant is a native of the West Indies. It was cultivated many years ago by Miller, but has been lost in most collections. The stem is of a very succulent nature, and apt to be affected by damps in the winter, at which season it should be sparingly supplied with water. It must be constantly preserved in the stove, and is readily increased by cuttings or suckers, which are produced abundantly from the roots. It flowers very freely during the greatest part of the summer.



Xyris operculata.

No. 205.

XYRIS OPERCULATA.

Class.	Order.
<i>TRIANDRIA</i>	<i>MONOGYNIA.</i>

.....

We raised this plant from seeds in 1800; it is a native of New South Wales. The leaves are like a rush, but have an elegant undulating twist through their length, as have the flower-stalks, which are about a foot and a half high. The blossoms are extremely delicate in their texture, lasting but a short time: they have no smell. The months of July and August are the usual season of flowering. It should be kept in the greenhouse in winter, and potted in loam and peat, giving it a large portion of water: it is increased by dividing the roots in the spring or summer.



Stapelia pulvinata.

No. 206.

STAPELIA PULVINATA.

Class.	Order.
<i>PENTANDRIA</i>	<i>DIGYNIA</i> .

.....

This most splendid species is a native of the desarts of South Africa. Masson, who first introduced it, says that it is called by the Dutch, Arabian Rose. It has been some years in England, but is not yet plentiful: the season of its flowering is July to September. The smell of the flower is not so disagreeable as of some of the kinds. The plant is very apt to break at the joints when loaded with a flower of such magnitude. It is increased by cuttings, and should be kept in a warm greenhouse all the year: in the winter it wants very little water: loam, mixed with a little lime rubbish, is the most suitable soil for it.



Erica fastigiata.

No. 207.

ERICA^{us} FASTIGIATA.

Class.	Order.
<i>OCTANDRIA</i>	<i>MONOGYNIA</i> .

A beautiful species, flowering in the autumnal months profusely. It is extremely delicate, and there is something of a transparency about the tube which is peculiarly striking. This plant has been long since introduced, nevertheless is little known, and to be found in very few collections, although so deserving a place in all. It is propagated with tolerable facility by cuttings: soil and culture as the others of the family, equally loving plenty of air. It is a native of the Cape of Good Hope.



Erica versicolor.

No. 208.

ERICA VERSICOLOR.

Class.

Order.

OCTANDRIA

MONOGYNIA.

This splendid sort was first raised about the year 1793. It is a native of the Cape of Good Hope : with us it flowers during the early part of the summer. It is a somewhat robust sort, and if encouraged, will grow to a large size, in which state it is very ornamental, as it flowers in such rich profusion. It is propagated by cuttings, and requires the usual greenhouse treatment, with sandy peat soil.

Nº 209



Illicium floridanum.

G. Cooke, fecit

No. 209.

ILLICIAM FLORIDANUM.

Class.	Order.
POLYANDRIA	POLYGYNIA.

.....

This beautiful plant is a native of West Florida, on the banks of the Mississippi; it was introduced in 1766 by Mr. Ellis: we were originally favoured with a plant of it, many years ago, by the late Mrs. Walker, of Southgate, since which we have abundantly increased it. It usually flowers in the latter part of the winter season, and should have a little more warmth than the common greenhouse, to make it thrive. In the summer also it is best to keep it under glass, as if exposed to the weather the leaves become yellow and lose all their beauty: they are very fragrant, although the flowers smell somewhat unpleasantly. It is propagated either by cuttings or layers; the latter is the preferable way, and the soil should be loam and peat.



Diosma ciliata.

No. 210.

DIOSMA CILIATA.

Class.	Order.
<i>PENTANDRIA</i>	<i>MONOGYNIA.</i>

.....

This is a beautiful little shrub, a native of the Cape: it flowers here in the spring very freely. Masson is said to have introduced it in 1774. As it is readily increased by cuttings, it is become pretty generally cultivated. The leaves have a smell which to some persons is not pleasant. It requires the common greenhouse protection, and is by no means tender or delicate in its constitution. The soil should be a mixture of peat and loam in equal proportions.

N. 211



Viola lanceolata.

G. Leddige del.

G. C. sc.

VIOLA LANCEOLATA.

Class.	Order.
PENTANDRIA	MONOGYNIA.

.....

This is a native of North America. It grows, according to Pursh, in overflowed meadows from Canada to Pennsylvania: several varieties of it have been found. The flowering season is during the months of June and July.

With us it requires to be kept in peat earth and well watered. It propagates itself by offsets from the roots, and is not subject to injury from cold, but ought to be shifted often, as the roots are very apt to decay if left too long undisturbed.

The genus *Viola* is numerous and its character very distinct: some species of it have been found in most of the temperate parts of the world. We lately obtained a dried specimen of a minute kind from Van Dieman's Island.





Acacia pulchella.

No. 212.

ACACIA PULCHELLA.

Class.	Order.
<i>POLYGAMIA</i>	<i>MONÆCIA.</i>

.....

This beautiful little plant is from New South Wales; whence it was introduced about the year 1803. It produces its fragrant flowers in May and June in the greatest profusion, generally some at the axil of every leaf: the leaves are extremely delicate, and the whole plant forms a small prickly bush: it must be kept in the greenhouse in the winter, and will increase pretty well by cuttings: it flourishes in a loam and peat soil. The roots of this and of the other Acacias have an unpleasant smell, although the flowers are so odoriferous. What a curious property is this, that a plant should derive from the same nutriment qualities so opposite? but the more we examine the productions of the Almighty, the more shall we ever find that

“ Wonderful indeed are all His works;
Pleasant to know, and worthiest to be all
Had in remembrance always with delight.”



Oxalis hirta.

Drawn by Miss Rehder.

G.C. st.

No. 213.

OXALIS HIRTA.

Class.

Order.

DECANDRIA

PENTAGYNIA.

.....

A native of the Cape, and a very showy species: it flowers in the autumn, and thrives in sandy peat soil. The tops die off in the spring, and the bulbs shoot up again in the latter part of the summer; they increase readily by offsets, and should be kept, in winter, in a greenhouse, taking care to preserve them from mice, which are very fond of them. This genus is numerous, chiefly natives of Africa.



G. Loddon. del.

Neottia picta.

G.C. sc.

No. 214.

NEOTTIA PICTA.

Class.

Order.

GYNANDRIA MONANDRIA.

.....

This plant was first sent to this country from Trinidad by Dr. Anderson, about the year 1805. It flowers freely every year in the spring months, and the blossoms are scented. It requires the stove heat constantly; but there is not that difficulty of cultivation attending this genus, which is so usual in the Gynandria Class. We find this kind succeed very well in peat earth and loam: the pots should not be too small, as the roots are thick and require room. They increase sparingly by offsets, which are occasionally produced, and may be separated as soon as they are of a moderate size.



Magnolia glauca. •

G. C. fig. 1

No. 215.

MAGNOLIA GLAUCA.

Class.	Order.
POLYANDRIA	POLYGYNIA.

.....

This is a fine hardy shrub, or small tree, as it frequently grows even in this country to ten or fifteen feet. It is a native of North America, where it sometimes attains the height of thirty feet or more. We have been informed, that there is a variety which in some places is found of more than double that size. It was introduced into England by Banister, being sent by him to Bishop Compton, who cultivated it in his garden at Fulham, in the latter part of the seventeenth century. The scent of the flowers is most exquisite; and in America, when the trees are in full bloom, can be distinguished three quarters of a mile off. It requires bog earth, or fine light yellow loam, in which we have had an old tree grow beautifully for many years: it flowers from May till October. Our drawing was made in the latter month, at which time it was almost covered with blossoms. It may be propagated by layers, though slowly. Fresh seeds, when they can be obtained from America, are far preferable.



Erica acuminata.

No. 216.

ERICA ACUMINATA.

Class.	Order.
<i>OCTANDRIA</i>	<i>MONOGYNIA.</i>

.....

This flowers in the spring months. It is rather scarce, being difficult to increase, as it strikes very sparingly by cuttings. The soil should be very sandy peat; and it must be kept in the greenhouse, giving it similar treatment with the other heaths. It is a native of South Africa, a part of the world which is now becoming daily more interesting. The progress which Christian missionaries are making in instructing the poor natives is most gratifying to every philanthropic mind. We may hope that, in a few more revolving years, multitudes will there be led, from the grossest ignorance, to the knowledge of that God and that Saviour, whom to know is eternal life.



217

Erica vestita purpurea.

G. C. Fitch.

No. 217.

ERICA VESTITA purpurea.

Class.	Order.
<i>OCTANDRIA</i>	<i>MONOGYNIA.</i>

.....

This has been known since the year 1794 in this country. It is a native of the Cape of Good Hope. It blossoms abundantly during the autumnal and winter months, and is an extremely fine showy plant. As new flowers are continually produced in an ascending spike, care should be taken to remove the lower ones when they are decayed, which will prevent their damping and becoming injurious to the leaves. The neglect of this precaution frequently occasions large plants to be naked and unsightly in the under branches.

It is propagated with some difficulty by cuttings, and requires the greenhouse with as much fresh air as possible: soil, sandy peat.



Gentiana intermedia.

No. 218.

GENTIANA INTERMEDIA.

Class.	Order.
PENTANDRIA	DIGYNIA.

.....

We originally raised this plant among a parcel of the *Gentiana septemfida* from seeds, which we received from Caucasus in the year 1805; since which we have also had several of them produced from seeds, which ripened upon our plants of the *septemfida*, from which it differs widely, being evidently allied in an equal degree to the *macrophylla*. It is perfectly hardy, and flowers abundantly in the summer, but has never yet perfected its seeds, nor have we been able to increase it much by dividing; it therefore seems likely to remain very scarce: we have kept it in a moderate sized pot in light loam, and with a plentiful supply of water during the hot weather.

N^o 219



Hakea microcarpa.

G. C. Fecht.

No. 219.

HAKEA MICROCARPA.

Class.	Order.
<i>TETRANDRIA</i>	<i>MONOGYNIA.</i>

.....

A curious character prevails in this plant of having the lower leaves flat, and those on the upper part of the shoot needle-formed; among the latter the flowers are produced: they are usually in perfection in September. It has been lately brought from Van Diemen's Island, and with us requires the greenhouse in winter, and may be increased by cuttings: the soil should be sandy peat, with a mixture of loam. This genus comprises a great number of species: several we are already in possession of; but a greater number remain as yet unIntroduced. They are all natives of New Holland.



Euphorbia anacantha.

No. 220.

EUPHORBIA ANACANTHA.

Class.	Order.
DODECANDRIA	TRIGYNIA.

.....

This plant was cultivated by Miller in 1731. It is a native of the Cape of Good Hope, and seldom grows above 6 or 8 inches high. It flowers for a considerable time in the autumnal months, admitting of ready increase by cuttings: the soil ought to be of a dry nature, such as sandy loam mixed with old mortar. In the winter season the plant should be kept in the greenhouse, and allowed little or no water.

There is a sort of neatness and prettiness about the various tribes of succulent plants, which renders them evidently adapted for a small greenhouse; especially where a person attends wholly to their management himself. They require little room and little care: they need hardly any water, especially in winter; and if kept from freezing, are, in general, not liable to be lost: in appearance no plants are more peculiar, and in form none are more curious: it is surprising that they are so very little cultivated.

N. 221.



Psoralea aphylla.

G. C. Fee.

No. 221.

PSORALEA APHYLLA.

Class.	Order.
DIADELPHIA	DECANDRIA.

.....

The Psoraleas are in general handsome papilionaceous flowers: the present species is a particularly fine one. The plant when young has trifoliate leaves, which fall off as it grows up, and on an old specimen scarcely any are to be seen. It is an eligible sort for a conservatory, as, planted out it thrives far better, and flowers much more than it does in a pot. The lower branches are pendulous, but the upper (from one of which our drawing was taken) grow erect. The flowering season is from May to July: the blossoms have a very agreeable smell, similar to those of the sweet pea. It may be encreased by cuttings, or seeds; and requires a mixture of loam and peat soil. It is a native of the Cape, and was introduced about 1790: being not very tender it requires merely to be protected from frost.



Malva umbellata.

No. 222.

MALVA UMBELLATA.

Class.

Order.

MONADELPHIA

POLYANDRIA.

.....

This is a native of New Spain, a country so extensive and so diversified in altitude, and of course in temperature, that it requires considerable experience to assign a proper situation for its productions, few of which are yet brought to England.

The celebrated Humboldt remarks, that little is known of the plants, which are either scattered over the numerous heights, or crowded together in the vast forests at the foot of the Cordilleras. New Herbaceous plants, he observes, are daily discovered on the central plain, even in the immediate vicinity of the city of Mexico; of course far greater numbers of trees and shrubs, still remain unknown in those less frequented, moist, and hot regions which form the eastern and western coasts of that important country.

Our plant has been growing in the greenhouse for two years, and has attained the height of four or five feet. It produced

plenty of flower buds in the year 1817, but the autumn of that year being cold they all dropped off: last season being so warm, they blossomed in great perfection, making an extremely rich and beautiful appearance. Cavanilles describes it as flowering at Madrid from January to March. It is increased by cuttings, and thrives in loamy soil: we received it from Paris in the year 1814.



Erica physodes.

No. 223.

ERICA PHYSODES.

Class.	Order.
<i>OCTANDRIA</i>	<i>MONOGYNIA.</i>

.....

This is a singular and beautiful heath; the foliage and growth are elegant, and the flowers are covered with a kind of varnish which gives them a glittering appearance, especially when the sun shines. It blooms abundantly in the spring and summer, and occasionally produces ripe seed in this country: it may also be increased by cuttings, but not without difficulty. It is a native of the Cape of Good Hope, whence it was sent home by Masson in 1788. The treatment which it requires is the same as for the other heaths; and in winter it must be preserved in an airy greenhouse, and potted in sandy peat soil.

N° 224.



Erica colorans.

W. Lediger del.

G. Cooke sc.

No. 224.

ERICA COLORANS.

Class.	Order.
<i>OCTANDRIA</i>	<i>MONOGYNIA.</i>

.....

Our present plant was introduced about the year 1809. It is a native of the Cape of Good Hope, and is somewhat nearly allied to the *Erica Linnæana*. It flowers in the summer months, and after the blossoms are fully open, they become more red, and at last quite purple. It is increased by cuttings with facility, and requires a sandy peat soil with the protection, in winter, of the greenhouse.



Stapelia barbata.

No. 225.

STAPELIA BARBATA.

Class.	Order.
PENTANDRIA	DIGYNIA.

.....

This has from four to six angles ; it is of very dwarf growth, and has sometimes been mistaken for the campanulata, but is certainly different. It has no smell, and the inside of the flower is completely lined with small hairs. It is a native of the South African deserts, and with us requires the warm greenhouse all the year, with a soil composed of loam and old mortar, and a very small portion of moisture in the winter season. The time of its flowering is in the months of September and October: it is increased by cuttings.





G. Endlicher del.

Theca bollea.

G. C. sc.

No. 226.

THEA BOHEA.

Class.	Order.
<i>POLYANDRIA</i>	<i>MONOGYNIA.</i>

.....

The two species of Tèa-trees, for such in our humble opinion they undoubtedly are, have been by some persons, (especially such as have only had an opportunity of seeing dried specimens,) considered as the same. The Bohea has a leaf generally about two inches long and three quarters of an inch broad, attenuated more toward the base than the point. It is coriaceous, very dark green, not at all undulated, and the serratures very small and even. The growth is quite erect, and the flowers are very numerous, usually two from each axil. It is a native of China and Japan, and will not endure the open ground in our winters; but must have the protection of a greenhouse or frame. It flowers in the autumn and beginning of winter, and the blossoms have a slight fragrance: it is increased by cuttings, thriving in loam and peat soil. It was introduced about the year 1780.

The use of tea is too well known to need

any description here. Its virtues have been the subjects of many contradictory opinions, even among medical writers, some praising it excessively, while others are as strenuous in its condemnation; it seems probable, therefore, that it possesses no very decided properties, either good or bad. It is generally understood that its original use in China was to correct the ill taste of the water, which in many parts of that country is very bad. It began to be used in London about 1660; when a tobacconist in Change-Alley retailed it, with a recommendation that it was to cure all disorders. Since that time the consumption has increased to an unparalleled extent, and thus an article which, two hundred years ago, had never been heard of, is become not only one of the necessaries of life to all, from the cottage to the palace; but at the same time an immense branch of commerce, and the source of a prodigious revenue to the state.



Thea viridis.

No. 227.

THEA VIRIDIS.

Class.

Order.

POLYANDRIA

MONOGYNIA.

.....

The Green Tea was introduced about the year 1768. It has a membranaceous leaf, from four to five inches long and about one inch and a half broad, oblong, more attenuated towards the point than the base, pale green, very much undulated, and the serratures large and irregular. The growth is crooked and straggling; the flowers are few, usually situated above the uppermost leaf; they are produced in the autumn earlier than the bohea. It is raised by layers and cuttings, and grows in loam and peat. This sort is hardy: we have one which has stood near thirty years in a very exposed situation, and never had any covering. The leaves of both kinds have but little scent; this is added by other ingredients, among which the flowers of the *Olea fragrans* are said to be much used. The Chinese affect to make a mystery of the process of drying and curing tea; it is very tedious, and employs vast numbers of

people. Attempts have been made to cultivate the plant for use in other countries; but it is not likely that they can succeed, as the value of labour is so much greater in most places than in China. Some have thought the green to be less wholesome than the bohea, as the former is supposed to derive some colouring principle from the copper pans in which it is said to be prepared: we rather think this is a mistake, as the leaf of that kind when fresh is of such a light hue as fully to account for this difference.



Stenanthera pinifolia.

No. 228.

STENANTHERA PINIFOLIA.

Class,	Order,
<i>PENTANDRIA</i>	<i>MONOGYNIA</i> .

.....

This is a handsome plant with rigid, glaucous, sharp pointed leaves. The flowers are very beautiful, a good deal like some of the heaths; but the corolla is covered half its length with the scaly calyx.

It is a native of New South Wales, whence it was introduced about the year 1811. The flowers soon drop, but, as they do not all come out at once, a succession is preserved for a considerable time; and our plants remained in bloom from October to January. We have increased it by cuttings: it thrives in sandy peat soil with a small quantity of loam intermixed.



Habenaria lacera.

No. 229.

HABENARIA LACERA.

Class.	Order.
GYNANDRIA	MONANDRIA.

.....

This interesting plant flowered with us in the month of July. It was first discovered by Michaux, and is a native of Pennsylvania and Virginia, in low meadows. The scape is erect, about a foot and a half in height: like most of the Orchideæ, it is difficult to cultivate. We have preserved it in a pot in loam and peat earth, placed in the shade, and kept pretty moist, but have no hope of its increasing here.

Plants of this class generally produce abundance of seed, which is as small as dust. Doubtless this is intended by the allwise Creator, who forms nothing in vain, to continue and multiply the species: yet, strange to tell, no cultivation has yet been able to bring these seeds to vegetate, although nothing is more certain than that they do grow in their native places, and some of them very plentifully.

N^o 230.



Symphoria racemosa.

G. Ledebiger del.

G. C. sc.

No. 230.

SYMPHORIA RACEMOSA.

Class.	Order.
<i>PENTANDRIA</i>	<i>MONOGYNIA</i> .

.....

This is a low, smooth, glaucous, bushy shrub, with branches somewhat pendulous: the leaves are all opposite, the lower ones irregularly notched, the upper quite entire. The flowers are produced in small terminal branches; the insides of them are filled with a sort of wool, under which a large portion of honey is deposited. They begin to blossom in July, and continue for two months or longer: they are succeeded by large snow-white berries, which hang till almost winter, and have a singular and beautiful appearance. This plant is quite new in this country; we received it, for the first time, last spring, from our friend Mr. Robert Carr, who informs us that it is a native of the Western country of North America, and was found by Lewis and Clark beyond the rocky mountains, in August 1805: we consider it, however, to be the *Symphoria racemosa* of Michaux.

It forms a valuable addition to the hardy

shrubs; a description of plants which can never be too much encouraged. It thrives in loamy soil, and may be increased by seeds or layers.



Aristolochia sempervirens.

G. C. fecit

No. 231.

ARISTOLOCHIA SEMPERVIRENS.

Class.

Order.

GYNANDRIA *HEXANDRIA*.

.....

This plant was cultivated by Miller in 1739; it is a native of the Island of Crete, and flowers with us from June to September: the blossoms are of a very singular form. It is a neat climber for a greenhouse, not at all tender; the leaves are strong, and not liable to decay in the winter; for which reason it is a fit plant for any dark or obscure place in a conservatory, where a more tender subject would not stand. It is increased by cuttings or division of the roots, and prospers in a loamy soil.



Androsace chamaejasme.

G. Ledeb. det.

G. C. sc.

N^o. 232.

ANDROSACE CHAMÆJASME.

Class.	Order.
PENTANDRIA	MONOGYNIA.

.....

This has been mistaken by some for the *A. villosa*; and there certainly is a resemblance between them. By long cultivation, however, we have no doubt of their being perfectly distinct. The leaves of the present species are broader, greener, and smoother, though more ciliate at the edges. The *Chamæjasme* has a constant habit of running at the root, which the other never does; it is consequently increased far more readily than the *villosa*, is in all respects hardier, and much more easily cultivated. It is a native of the Austrian Alps, and forms a beautiful little rock plant. We keep them in small pots in light loam, without any covering, and in summer exposed to the full sun: they flower in the spring, and frequently a second time in the autumn.



W. Loddiges del.

Erica viridescens.

Michx. x.

No. 233.

ERICA VIRIDESCENS.

Class.

Order.

OCTANDRIA

MONOGYNIA.

.....

This was introduced from the Cape about the year 1804. The singular hue of its flowers forms a contrast with the lively colours, which in general prevail in this vast genus. It blows in the spring, continuing a long while, and is readily increased by cuttings. It should be potted in sandy peat mould, and kept in the greenhouse in winter, treating it as the other kinds.



Erica florida.

Molliger del.

G. C. sc.

No. 234.

ERICA FLORIDA.

Class.

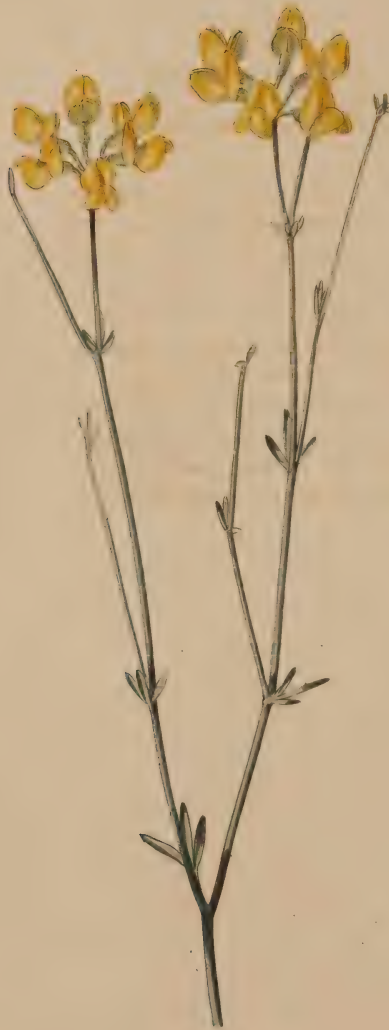
Order.

OCTANDRIA

MONOGYNIA.

.....

This delicate species was introduced in 1803 by Mr. Hibbert: it has at all times been scarce, as it is very difficult to increase. It flowers in the spring and beginning of summer, continuing in bloom for a considerable time. In stature it is somewhat low, forming a dwarf bush. The colour of the flowers heightens considerably after they have been open a while. It must be kept in an airy greenhouse, and potted in sandy peat soil.



No. 235.

CORONILLA JUNCEA.

Class.

Order.

DIADELPHIA

DECANDRIA.

.....

This is a native of the South of France, and was cultivated in England before 1770: it may with propriety be treated as a greenhouse plant. The flowers, which are of a beautiful bright yellow, are produced in succession during the summer and autumn. The plant is slender and delicate in its growth, seldom attaining a greater height than 2 or 3 feet. It may be propagated with facility by cuttings, and requires a loamy soil, with not too much water in the winter.



Rhexia holosericea.

No. 236.

RHEXIA HOLOSERICEA.

Class.	Order.
<i>OCTANDRIA</i>	<i>MONOGYNIA.</i>

.....

A native of Rio Janeiro: it grows about 4 or 5 feet high, and produces its elegant flowers in a terminal branching panicle; they are of short duration, but as they are produced two or three at a time in succession, the whole lasts a considerable while. Their season is the latter part of the summer and autumn. The leaves have a kind of satin-like gloss on their surface, occasioned by minute hairs, which produce a singular and beautiful effect. The plant requires the stove heat and is a free grower, but does not seem as if it would be very long lived: it is increased by cuttings, and loves a rich loamy soil.

Although the genus is arranged in the Linnæan system in the eighth class; this species should belong to the tenth, having a 5 cleft calyx, 5 petals, and 10 stamens, differing from *Melastoma* only in the seed-vessel.



No. 237.

EPACRIS PURPURASCENS.

Class.

Order.

PENTANDRIA

MONOGYNIA.

.....

This was the first of this genus which was brought to this country from New South Wales, about the year 1803; being pretty readily increased by cuttings, it is now become tolerably plentiful.

It generally commences blooming in January, and continues for two or three months, almost every leaf being furnished with a flower coming forth out of its bosom. This plant will ever be esteemed a very ornamental addition to the greenhouse, and is not at all tender, but delights in fresh air. It should be kept in a small pot, and sandy peat earth mixed with a moderate portion of loam.

Throughout New Holland, as far as has been visited, not a single heath has ever been found, although the same parallel in Africa is so splendidly adorned with innumerable species. The Epacrideæ, however, seem formed by Divine wisdom to occupy a similar station, and with

nearly equal beauty. Thus every quarter of the globe has its peculiar treasures; all dispensed by the same munificent hand; all equally deserving our admiration and gratitude.



Camellia japonica prostrata

No. 238.

CAMELLIA JAPONICA *pæonæflora*.

Class.

Order.

MONADELPHIA

POLYANDRIA.

.....

We consider this beautiful variety of the Camellia to be a most valuable acquisition to the Greenhouse. It is a free grower, and somewhat more slender in its shoots than most of the other kinds. Sometimes it has been mistaken for the Pompone, which the leaves do indeed resemble, but the flowers are totally different. The spring is the principal season of its blooming, although, like the others, it frequently begins in autumn; this was the case with the plant, whence our drawing was taken in December last, when it was in great perfection. It may be increased by grafting upon the single sort, and also (but more slowly) by cuttings, and requires the same soil and treatment as hath been already mentioned for the former kinds.

We were favoured with cuttings of this fine plant by Charles Hampden Turner, Esq. of Rooks Nest, Surrey. It was imported about the year 1810 from China, by

Captain Welbank. We feel much pleasure in noticing that, since we published our account of the heating apparatus, we have received Mr. Turner's permission to mention, that he originally recommended the steam plan to us, having seen it most successfully applied at his friend's, Peter Marsland, Esq. Stockport, Cheshire. To this gentleman he kindly introduced us, and from him we experienced the utmost liberality; his communications were of the greatest importance to us, and he afforded us every facility to induce us to proceed. We are happy in having this opportunity of acknowledging obligations which we shall ever thankfully remember.



Stapelia rufa.

No. 239.

STAPELIA RUFA.

Class.	Order.
<i>PENTANDRIA</i>	<i>DIGYNIA.</i>

.....

This plant was first discovered by Masson, who has delineated it in his Monograph on this curious genus. It flowers in the autumn and is devoid of scent: the blossoms continue open about a week. The peduncle is usually near two inches long, slender and spreading: the herbage is clothed with a sort of fine nap, scarcely perceivable to the eye, but sensible to the touch. It was introduced from the Cape in 1799, and requires a warm greenhouse all the year. The soil, sandy loam: in winter it must be kept rather dry.



Hemanthus coccineus.

No. 240.

HÆMANTHUS COCCINEUS.

Class.	Order.
HEXANDRIA	MONOGYNIA.

.....

A native of the Cape of Good Hope, and has been long cultivated in this country. The flowers, which appear in autumn, are nearly over before the leaves begin to push from the bulb; when full grown, each leaf is about a foot long, lying flat on the ground; these decay in the spring, after which the pots in which the bulbs are kept should stand without any water in a dry hot place till autumn: during the growing season they require a tolerable share of moisture and the protection of the greenhouse. They are slow of propagation, rarely throwing up any offsets: soil, sandy peat.



Banksia oblongifolia

G. Lindley del.

No. 241.

BANKSIA OBLONGIFOLIA.

Class.	Order.
<i>TETRANDRIA</i>	<i>MONOGYNIA.</i>

.....

This is one of the first species which was introduced from New South Wales, whence it was brought about the year 1792. It was called *dentata*, but that name is now transferred to another sort. It grows with us to five or six feet high, or more; having many knotty tubercles on the stem, especially near the root, which is frequently enlarged by them into a kind of irregular woody bulb.

The spike of flowers, which is short, is produced between the forks of the branches, and usually from wood four or five years old. It is above a year growing before the flowers open, which on our plant was in the month of November.

It is extremely difficult to propagate except by seeds, which are occasionally brought to this country. Like those of all this genus, they are enclosed in cells, which are excessively hard, and disposed as the flowers, forming a sort of cone, which in the

present species is generally four or five inches in length. Great care is necessary in opening these cells, that the seeds may not be injured. The plant must be kept in a greenhouse in winter, and potted in peat and loam.



Stepelia hamata.

No. 242.

STAPELIA HAMATA.

Class.	Order.
<i>PENTANDRIA</i>	<i>DIGYNIA.</i>

.....

This is one of the many species which were sent to Vienna by Scholl, from the South African deserts, before the year 1799. We have had it in cultivation for several years; but it never flowered with us till December last. It grows freely, and is a rather hardy kind, easily cultivated, and increased by cuttings. It should be kept in the greenhouse all the year, with a moderate allowance of water in the summer, but none in the winter. The soil most proper for it is a poor sandy loam.



Erica vestita alba.

No. 243.

ERICA VESTITA *alba*.

Class.

Order.

OCTANDRIA

MONOGYNIA.

.....

This elegant heath was raised about the year 1790. It is a native of the Cape, and flowers at different seasons. Our drawing was taken in the Spring. It is a much more delicate variety than either of the two former ones which we have published; and we find it rather inclined to grow tall and slender, the lower branches becoming bare. This propensity may be obviated by occasionally breaking off the tops, especially after flowering, which promotes the growth of side branches. The leaves being so closely set, the plant often suffers in winter from damps, which may be avoided, by placing it in a very airy situation in the greenhouse. The soil should be as for the others of this delightful genus.

Nº 244.



Erica gracilis.

G. Loddiges del.

G. C. sc

No. 244.

ERICA GRACILIS.

Class,	Order.
OCTANDRIA	MONOGYNIA.

.....

This is a pleasing species, a native of the Cape of Good Hope, whence it was first brought about the year 1793.

It flowers at different seasons, but principally in the spring and autumn months, remaining a very long time in bloom.

It is easily increased by cuttings, and requires the usual greenhouse management in winter. Being a dwarf kind, it will not want a very large pot, and the soil must be sandy peat.



Ranunculus parnassifolius.

G. Loddiges del.

G. C. sc.

No. 245.

RANUNCULUS PARNASSIFOLIUS.

Class.

Order.

POLYANDRIA

POLYGYNIA.

.....

This beautiful plant is a native of the Alps of Switzerland, Dauphiny, and Carinthia, as also the Pyrenees. It has been long known in this country, though very scarce. We received a plant of it many years ago, from our late valued friend, Mr. Donn, of Cambridge. This, by careful cultivation, has become the parent of a thriving progeny. It succeeds very well in a pot in sandy loam, without any protection, allowing it a sufficiency of water in the summer: it flowers in June, and sometimes ripens seeds; it may also be now and then successfully divided in the spring.

The genus *Ranunculus* has been amazingly extended of late. Willdenow, in his edition of Linnæus's *species plantarum* 1799, has sixty-one: Sir J. E. Smith, in Rees's *Cyclopædia*, has increased them to eighty-five; but De Candolle has almost doubled this number, describing 134, besides

twenty-one imperfectly known or doubtful,
in all, 155! This may be considered a
striking example of the progress of Bota-
nical science during the last twenty years.



Passiflora alata.

No. 246.

PASSIFLORA ALATA.

Class.

Order.

MONADELPHIA

PENTANDRIA.

.....

This splendid plant is a native of the West Indies: it was introduced in 1772, and flowers during the greater part of the summer. It is a very fine climber for a stove, which it will not fail to adorn, as well as perfume, with its beautiful and fragrant flowers. They last only one day, but are renewed in a continued and very abundant succession.

It is readily propagated by cuttings, and loves a rich loamy soil.



Borbonia laevigata.

Det. Fee!

No. 247.

BORBONIA LÆVIGATA.

Class.

Order.

DIADELPHIA

DECANDRIA.

.....

We received seeds of this rare plant from our late friend, Mr. George Scholl, who collected it at the Cape of Good Hope, before the year 1799.

It flowers abundantly in the summer months, and when well grown, is a very pretty greenhouse plant. As it becomes old, the lower branches grow naked and unsightly, which renders it necessary to renew the plant occasionally by cuttings, which succeed pretty readily: the soil should be sandy loam.



Crataegus glabra.

No. 248.

CRATÆGUS GLABRA.

Class.	Order.
ICOSANDRIA	DIGYNIA.

.....

This is a native of Japan and China: it was introduced about the year 1804. It is a fine, evergreen, shining leaved plant, growing very vigorously. The young shoots are of a beautiful red hue. It propagates with difficulty by cuttings, and has been tried by grafting on the common thorn, but does not stand. We are informed, that in France it is usual to bud it upon the Quince; yet whenever plants can be raised on their own roots, as in this case, it is obviously the best and most natural method.

With us it flowered in December; the blossoms were without scent. We have hitherto treated it as a greenhouse plant, but there is reason to believe that it will endure the winter very well out of doors; as from its early growth (beginning to push sometimes in January) it would seem to have originated in a climate far colder than our own.



G. Loddiges del.

Mimosa sensitiva.

G. C. sc.

No. 249.

MIMOSA SENSITIVA.

Class.	Order.
POLYGAMIA	MONOECIA.

.....

The sensitive plant is said to have been cultivated in the Oxford garden in 1648. It rises with a slender shrubby stem to the height of three or four feet, with loose pendulous branches, from the ends of which, for six inches or more in length, the flowers are produced in several heads; they usually appear in the Autumn, and are sometimes succeeded by seeds. It may also be propagated by cuttings, and should be potted in light loam, and preserved in the stove. Like most other pinnated leaved plants, the leaves close in the evening, and open again early in the morning: they likewise move if touched, and the stalks, if pressed, fall down, but recover their former situation in a little time. This remarkable property, which also exists in some other plants, has exercised the ingenuity of naturalists in endeavouring to account for it. Their researches, however, have not yet much elucidated the matter, and it is not likely that

they will. It is indeed one of those problems which can be solved in no other way than by immediate reference to the Almighty Creator. He has endowed these plants with this faculty; and not one of His creatures, even the wisest of them, can assign a reason why. They may examine, they must admire, and if the study of such a subject does but assist to humble them in their own eyes, and to raise their minds towards the Author of their being; who can tell in how great a degree the end of its creation may be answered?



Atragene austriaca

G. C. G.

No. 250.

ATRAGENE AUSTRIACA.

Class.	Order.
POLYANDRIA	POLYGYNIA.

.....

This is a native of the Austrian Alps, and was named by Scopoli. We received it from the excellent Baron Zois, in 1792; since which time it has become pretty general, being a very beautiful climber. Its elegant flowers are produced early in the spring, and last a considerable time: it may be increased by cuttings and layers, but much better by seed, which frequently ripens here, and it will thrive in almost any soil or situation, as it is extremely hardy.

The learned De Candolle has wholly discarded this genus, incorporating most of the species with Clematis, already unwieldy from its numbers. His reasons are that Atragene was supposed to have been applied by Theophrastus to Clematis vitalba! But this is a refinement of criticism, which perhaps few generic names would be altogether proof against.



Mesembryanthemum bracteatum.

G. Loddiger del.

G. C. sc.

No. 251.

MESEMBRYANTHEMUM BRACTEATUM.

Class.

ICOSANDRIA

Order.

PENTAGYNIA.

.....

This is a beautiful autumnal flowering species, continuing a long time in perfection; the flowers remain open night and day, which is the case with but few of this extensive genus. It was cultivated in 1723 by Sherard at Eltham, and is a native of the Cape of Good Hope. The leaves are irregularly formed, and covered with small tubercles; by holding them up to the light they appear like transparent dots. The numerous family to which this belongs are chiefly of very easy culture, striking freely from cuttings, and needing no other care than protection from frost, and to be kept dry in winter. The soil should be sandy loam. Many of them are extremely beautiful from the splendour of their flowers and the rich abundance in which they are produced.

N° 252.



Heliconia bihai.

Plant 10 Feet in height.

G. Lindgren del.

G. C. sc.

No. 252.

HELICONIA BIHAI.

Class,

Order,

PENTANDRIA

MONOGYNIA.

.....

A native of the West Indies; it was introduced in 1786 by Dr. Anderson, and requires the constant heat of the stove. We have represented the whole of our plant, which was ten feet high when it flowered in the month of January last: the spathes remain a long time in beauty, presenting a very rich and singular appearance: a small portion only of the flower is seen, the rest being concealed within.

It increases abundantly by offsets, which are constantly produced from the root. In order to cause this plant to flower, it is necessary to put it into a large pot, in rich loamy earth, mixed with a little coarse sand. Only one stem must be suffered to grow up: the side shoots should be cut off as soon as they appear: if this be neglected, they never flower: the plant loves abundance of water.



Phyllica Plumosa.

C. Loddiger del.

W. H. & Co. sc.

No. 253.

PHYLICA PLUMOSA.

Class.

Order.

PENTANDRIA

MONOGYNIA.

.....

This is a native of the Cape of Good Hope: it has been cultivated in England ever since 1759, but has never been plentiful. It flowers in the spring, and its rich feathery branches are very beautiful: it may be increased either by seeds, (which must be obtained from its native country, as it produces none here,) or by layers, which require two years in general to make sufficient roots. They should have rather small pots and sandy peat earth, keeping them in a greenhouse in the winter, with abundance of air and not too much water.

N° 254.



G. Loddiger del.

Witsenia corymbosa.

G. C. sc.

No. 254.

WITSENIA CORYMBOSA.

Class.	Order.
TRIANDRIA	MONOGYNIA.

.....

Few plants are more pleasing in the colour, or more lasting in the duration of their blossoms than our present subject, especially when it has attained a pretty good size, which it does in four or five years. The plant, from which our drawing was made, was nearly two feet in height, and had at one time upwards of twenty heads of flowers open. It was introduced about the year 1803 by Mr. Hibbert, from the Cape of Good Hope, of which it is a native.

It is increased with difficulty by cuttings or off-sets, which may be now and then obtained: the soil in which we have found it to flourish most advantageously is sandy peat, and it may safely be treated as a hardy greenhouse plant.



Caladium bicolor

No. 255.

CALADIUM BICOLOR.

Class.	Order.
<i>MONOECIA</i>	<i>POLYANDRIA.</i>

.....

This is found in several of the West India Islands; also in a cultivated state in Madeira, whence it was introduced into this country many years since. It is highly ornamental to the stove, from the elegant colour of its leaves, in which the red and green are beautifully blended, in a way which it is impossible to imitate by any art.

It flowers in the spring, and is increased by offsets, which are freely produced: they should be potted in rich loam.

The leaves of this and several other plants possess the property of repelling water, which rolls off them in small globules: a brilliant effect may be produced by holding one of these leaves in clear water a little beneath the surface in the sunshine.



Erica Walkeri.

No. 256.

ERICA WALKERI.

Class.

Order.

OCTANDRIA

MONOGYNIA.

.....

This was introduced from the Cape about the year 1799: it received its appellation in honour of Mr. Walker, of Liverpool, who possessed a fine collection of plants. It requires the greenhouse, with the usual treatment, and is readily propagated by cuttings.

It blows abundantly in the spring, and the flowers are truly charming, as indeed are most of this beautiful family; of them it may well be said,

“ What skill, what form divine,
Deep felt in these appear! a simple train,
Yet so delightful, mixed with such kind art,
Such beauty and beneficence combined;
Shade unperceived, so soft'ning into shade,
And all so forming an harmonious whole,
That as they still succeed they ravish still.”





Erica triumphans

No. 257.

ERICA TRIUMPHANS.

Class.

OCTANDRIA

Order.

MONOGYNIA.

.....

A very showy sort: it is a native of the Cape of Good Hope, and was introduced about the year 1802. Its principal season for flowering is May and June, and the blossoms retain their beauty for a very considerable time.

Our plants have occasionally produced ripe seeds, by which they have been increased, as they do not succeed by cuttings. The soil must be sandy peat, and the plants must be well supplied with air during the season that they are preserved in the greenhouse.



Origanum Tournefortii.

No. 258.

ORIGANUM TOURNEFORTII.

Class.

DIDYNAMIA

Order.

GYMNOSPERMIA.

This is a native of Greece: it was introduced in 1788 by the late Dr. Sibthorp, who found it in the Island of Amorgos, and named it in honour of its first discoverer, Tournefort, the celebrated French botanist and traveller.

With us it is necessary to preserve it in the greenhouse in winter, keeping it moderately dry, as it is subject to damp off. It is increased easily by cuttings during the summer months, which are also the season of its flowering. The soil should be loam and the pots small.



Drawn by Miss Roberts

Allamanda cathartica.

No. 259.

ALLAMANDA CATHARTICA.

Class.

Order.

PENTANDRIA

MONOGYNIA.

.....

This fine plant was named by Linnæus after his correspondent, F. Allamand, a Dutch physician. Aublet, who has given a representation of it by the name of *Orelia grandiflora*, found it in Cayenne and Guiana, on the sea coasts and the banks of rivers, growing among other trees and shrubs, and supporting itself by them to a considerable height. It flowers there in September, which is also the season for it in this country, into which it was introduced in 1785. The capsule is large and prickly, containing a number of flat seeds: the whole plant is milky.

It must be kept in the stove during the greater part of the year, and planted in loam and peat earth: it may be readily increased by cuttings.



Cliffortia arachnoidea.

No. 260.

CLIFFORTIA ARACHNOIDEA.

Class.	Order.
DIOECIA	POLYANDRIA.

This genus was named in honour of Mr. Clifford, of Amsterdam, who was a friend and patron of Linnæus in his early years: he had an extensive collection of plants, a magnificent account of which by Linnæus, under the title of Hortus Cliffortianus was printed in 1737.

All the species of Cliffortia are natives of the Cape. The present sort we raised about the year 1799: in habit it has a distant resemblance to the ruscifolia, but the young plants are covered with a sort of film or cobweb. Some of the leaves have two teeth, some one, and some are quite entire.

Although the flowers are not showy, the plant is neat and makes a pleasing variety, highly desirable in a collection. It requires the greenhouse, and is easily multiplied by cuttings, and preserved in a moderate sized pot with loamy soil.



Homalium racemosum.

G. Loddiges del.

No. 261.

HOMALIUM RACEMOSUM.

Class.	Order.
<i>POLYANDRIA</i>	<i>TRIGYNIA</i> .

.....

This is a native of Martinico and Jamaica, on the banks of rivers: it has been lately introduced, not being in the last edition of the Kew catalogue. The leaves are handsome, and of a rich glossy green; the branches somewhat pendulous: the flowers are produced in the winter and spring: the petals are from five to seven in number; our plant had chiefly five.

It may be increased by cuttings, and should be planted in loam and peat. In the winter it must be preserved in the stove; but in summer will bear exposure for two or three months without inconvenience.



Sprengelia incarnata

No. 262.

SPRENGELIA INCARNATA.

Class.

Order.

PENTANDRIA

MONOGYNIA.

.....

A native of New South Wales: it was introduced about the year 1793: it is a spring flowering plant, and highly ornamental to the greenhouse, as it continues a very long time in bloom: it is readily increased by cuttings, and flourishes in sandy peat earth. In its growth it is rather low, seldom surpassing two or three feet. There is as yet but one species brought to this country. It received its appellation from Sir J. E. Smith, in honour of a German botanist of the name of Sprengel.



Andersonia sprengelioides.

No. 263.

ANDERSONIA SPRENGELIOIDES.

Class.	Order.
PENTANDRIA	MONOGYNIA.

.....

This was named by Mr. Brown in commemoration of three different botanists of the name of Anderson, to which number Sir J. E. Smith has since added a fourth, so that it may well be said there exists a fourfold motive for the establishing this genus: in other respects it is so nearly related to our last article, that we can hardly help thinking, with the learned President, that plants so strikingly alike should not rank under different genera.

This is likewise a native of New Holland: it was found by Mr. Menzies, on the South coast, and sent home in 1803. With us it is considered a very pretty greenhouse plant, flowering abundantly in the summer season: it may be increased by cuttings, and should be potted in sandy peat earth: like the preceding subject, it is of very moderate growth.



Ardisia elegans

No. 264.

ARDISIA ELEGANS.

Class.

Order.

PENTANDRIA

MONOGYNIA.

.....

This is a native of the East Indies: it was introduced about 1805, and is a very pretty stove plant: the flowers are produced at different seasons; they come out from the ends of the side shoots, and have not yet been succeeded by seeds with us. The plant does not grow very large, rarely exceeding two feet in height, and flowering when quite young. It may be increased with some difficulty by cuttings: the soil should be loam and peat. In the summer it may be put out of doors in a sheltered situation for two months, which will conduce much to its health and vigour.



Erica peziza

No. 265.

ERICA PEZIZA.

Class.	Order.
<i>OCTANDRIA</i>	<i>MONOGYNIA.</i>

.....

This is a delicate and beautiful species, flowering abundantly in the beginning of summer, and for a great length of time: it is not very easily multiplied by cuttings, and is at present scarce. It was not many years since introduced from the Cape of Good Hope. In cultivation it needs the same care and precaution as the other kinds: the soil must be sandy peat, and the situation in the greenhouse the more airy the better.



Erica sebana lutea.

No. 266.

ERICA SEBANA *lutea*.

Class.

Order.

OCTANDRIA

MONOGYNIA.

.....

This is a native of the Cape of Good Hope: it was first introduced about the year 1792, and the flowers are produced during the spring and summer.

It is somewhat difficult to propagate by cuttings, and is at present found in but few collections: it does not require a very large pot, and should be planted in sandy peat earth. In the winter season it is necessary to keep it from frost in a greenhouse, with great plenty of air admitted at all times.

N. 267.



Lachenalia pendula.

G.C. 11

No. 267.

LACHENALIA PENDULA.

Class.

Order.

HEXANDRIA

MONOGYNIA.

.....

A native of the Cape of Good Hope, whence it was introduced about the year 1774: it is a beautiful spring flowering plant of easy culture, thriving best in not too small pots, and in rich loamy soil.

After flowering the leaves decay, when the pots should have but little water till autumn, at which season they begin to shoot up again. They should be preserved in the greenhouse, merely defending them from frost, as they are not at all tender.

Mice are fond of these bulbs, and if care be not taken to keep them out of their way, they will soon be all lost.



Polygala heisteria.

No. 268.

POLYGALA HEISTERIA.

Class,	Order.
<i>DIADELPHIA</i>	<i>OCTANDRIA.</i>

.....

Among all the pretty plants which the bountiful hand of Infinite Goodness has formed to cheer and delight us in the wintry months, few, perhaps, possess more attractions than this. The delicate and lively glow of its blossoms it is impossible to describe or imitate: the length of time they continue is astonishing; indeed this plant can hardly ever be said to be out of bloom. It is a native of that highly favoured spot, the Cape of Good Hope, and has now been long cultivated in this country; it is increased by seeds or cuttings: soil, sandy peat: it loves plenty of air, but is impatient of frost.

The specific name has been given after Dr. L. Heister, a celebrated German physician: he was a determined opponent to the system of Linnæus, which at that time had recently made its appearance in the world.



Camellia japonica f. albo-plena.

No. 269.

CAMELLIA JAPONICA *alba plena*.

Class.

Order.

MONADELPHIA

POLYANDRIA.

.....

This is, without doubt, one of the most beautiful and splendid plants which has ever been cultivated any where: it is a native of Japan and China, those countries so renowned for magnificence in flowers; it has probably been known there for ages, but in England is but of comparatively novel introduction: twenty-five years ago it had never been seen here, since which time its beauty has caused it to be most industriously propagated, and, though now become numerous, it is still as charming as ever. During the last season we had plants in bloom from August till May, and, with a very little management, they could be produced in perfection every month in the year: nothing more is necessary than giving a few of them a pretty good heat at different seasons. They are propagated either by grafting on the single sort, or by cuttings as well as layers: the soil should be rich loam.





Primula marginata.

No. 270.

PRIMULA MARGINATA.

Class,	Order.
<i>PENTANDRIA</i>	<i>MONOGYNIA</i> .

.....

This is a native of the Swiss Alps, and was introduced in 1777: it flowers plentifully in the spring, and, like all the rest of the genus, recommends itself by its elegance and beauty. The edges of the leaves are curiously bordered with a kind of white powder, which makes them look very lively. It may be kept in a small pot in loam, and requires no shelter at any season, being perfectly hardy: the roots may occasionally be divided for increase, as it does not bear seed with us.



— Lockhart del.

Bossiaea heterophylla.

— Lockhart sculp.

No. 271.

BOSSIÆA HETEROPHYLLA.

Class,	Order.
<i>DIADELPHIA</i>	<i>DECANDRIA.</i>

.....

Our present subject is a native of New South Wales, introduced about the year 1792: it is a very conspicuous plant; the season of its blooming is in the autumn and beginning of winter. After the warm summer of 1818, it flowered with us in the greatest profusion, which it had not done for two or three years before, owing probably to the cold seasons which we had experienced. Its height does not much exceed two feet, forming a handsome upright shrub. It must be kept in winter in the greenhouse. The soil should be loam and peat. We have not hitherto been able to increase it in any way except by seeds, which have not yet been perfected in this country.



Asclepias salicifolia.

chase del.

No. 272.

ASCLEPIAS SALICIFOLIA.

Class.	Order.
<i>PENTANDRIA</i>	<i>DIGYNIA.</i>

.....

We received this plant from our friend Mr. Shepherd, of the Liverpool Botanic Garden, an establishment which, under his judicious and liberal management, is likely to become the first for plants in this kingdom. It is not exactly known of what country it is a native: it produced its delicate white flowers in our stove for at least four months during the summer and autumn; they have a very agreeable smell.

The seeds ripened with us: it may also be increased either by cuttings or dividing the roots: the soil should be rich loam.



Lachnæa purpurea.

No. 273.

LACHNÆA PURPUREA.

Class.

Order.

OCTANDRIA

MONOGYNIA.

.....

This very elegant plant was brought from the Cape of Good Hope about the year 1800: it begins to flower in April, continuing uninterruptedly in general till August. It requires to be kept in a cool airy greenhouse in winter, and ought not to have too much water: it is propagated by cuttings. The most proper soil for it is sandy peat, and the pots ought not to be very large.



Pancratium mexicanum.

G. J. Steiner del.

No. 274.

PANCRATIUM MEXICANUM.

Class.

HEXANDRIA

Order.

MONOGYNIA.

Although this bulb was cultivated by Miller in 1752, it is still scarce, and to be seen in very few collections, having been for a long time quite lost in this country. Our plants were received about three years since from America; and in the month of February they flowered: it should be kept in the stove, and potted in sandy loam. The flowers are no more than two in number; they last a few days, and are slightly fragrant: it multiplies itself by offsets, which are thrown up at some distance from the bulb, in which it differs from the rest of this genus, which increase by dividing close: it does not retain its leaves, as most of the others do, the whole year; these die away in the latter part of the summer, and come up the beginning of winter, before the flowers.



Azalea indica.

No. 275.

AZALEA INDICA.

Class,	Order,
PENTANDRIA	MONOGYNIA.

This superb plant was introduced into this country about the year 1810; and was first cultivated by our friend Mr. Anderson, of the Chelsea Garden, who was successful in recovering and increasing an imported plant, from which all that are at present in England were derived. It flowers in the spring, and is a native of China and Japan, in which countries many other varieties, and perhaps species, are cultivated; of these Kæmpfer has enumerated above twenty: any of them would be highly desirable could they be brought home alive, which is a difficult matter. They seem to have a great aversion to the sea air, and moreover the roots are of a nature not calculated to support the want of water, which often occurs on ship-board, and which would soon destroy them.

This plant requires the greenhouse and should not be exposed too early in spring, at which season, if kept warm, it usually

flowers more plentifully, and grows more freely than if kept too cold ; the flowers are also larger.

It is easily propagated by cuttings or layers, and thrives in peat earth and loam.



Erica pellucida.

Leath. Bot. 181.

No. 276.

ERICA PELLUCIDA.

Class,	Order,
<i>OCTANDRIA</i>	<i>MONOGYNIA.</i>

.....

This was introduced about the year 1800 from the Cape, of which it is a native: it flowers in the spring, and when the blossoms are abundant, which is sometimes the case, it is very showy.

It may be increased readily by cuttings, and grows faster than many of the other sorts: in treatment it is necessary to expose it as much as possible to the air, and the soil should be sandy peat, sheltering it from the frost in winter in the greenhouse.



Erica thunbergii.

No. 277.

ERICA THUNBERGII.

Class.

Order.

OCTANDRIA

MONOGYNIA.

.....

This species was named after the celebrated Swedish botanist, Thunberg, so well known by his travels to the Cape, Japan, &c. It is a native of Africa, and was introduced in 1806: it requires as usual to be preserved in a very airy greenhouse, in sandy peat soil, and may be slowly increased by cuttings, or (which is better) by seeds, which are sometimes ripened in this country.

The structure of the flower is extremely curious and deserving of attention; but where indeed is the flower or the plant that is not? The more we look into the immense variety of the works of the Omnipotent, the more do we and must for ever find for our entertainment and admiration.



Drimia lanceifolia

No. 278.

DRIMIA LANCEÆFOLIA.

Class.

Order.

HEXANDRIA

MONOGYNIA.

This bulbous rooted plant was introduced about the year 1800, from the Cape of Good Hope. Its season for flowering with us is in the autumn, when it lasts a long time, and forms a pleasing variety: it takes but little room, and helps to enliven the greenhouse at the period when the greater part of the plants have done flowering.

It is of easy culture, requiring a rich loam, with a little sandy peat, and should be re-potted every two years or oftener. It increases itself by offsets, which are sometimes produced in considerable abundance.



Lasiopetalum solanaceum.

No. 279.

LASIOPETALUM SOLANACEUM.

Class.	Order.
<i>PENTANDRIA</i>	<i>MONOGYNIA</i> .

.....

A native of New South Wales : it was introduced about the year 1803, and flowers abundantly in the summer months : it forms a thick bushy shrub, of no great height. The leaves have a peculiar form and character, and contribute to ornament the greenhouse by their variety. The plant is not very tender, and may be multiplied by cuttings, as it does not ripen seeds with us : a mixture of loam and peat is a very suitable soil for it.



Duranta plumieri.

Glodtger del.

No. 280.

DURANTA PLUMIERI.

Class.

Order.

DIDYNAMIA

ANGIOSPERMIA.

This plant is a native of the West Indies: it was discovered by Plumier, the celebrated French botanist, who found it in Hispaniola. The leaves vary considerably in form, some being quite entire, while others are deeply notched. It forms a pretty shrub of moderate growth, flowering more freely than the others of this genus: with us its season is the latter part of the summer. It is not difficult to increase by cuttings, and grows well in loamy ground. In winter it requires the stove, but in the summer may be hardened so as to support the open air with great advantage.



Caladium viviparum.

L. Eschsch. del.

No. 281.

CALADIUM VIVIPARUM.

Class.	Order.
MONOECIA	POLYANDRIA.

.....

This is a native of India, which we raised from seeds received from our late friend Dr. Roxburgh, of Calcutta, who named it viviparum, from the curious circumstance of its producing a kind of erect shoot, several of which are thrown up around the bulb in different directions. These grow five or six inches high, bearing a number of little bulbs, which after a time, dropping off, become plants.

The leaves are very large and beautiful; we have had them upwards of two feet in diameter; they fall off in autumn, and are renewed early in the spring.

It is necessary to keep the plant constantly in the stove: it should have a large sized pot, and be planted in rich loam, with a plentiful supply of water.



Psoralea decumbens.

No. 282.

PSORALEA DECUMBENS.

Class

Order.

DIADELPHIA

DECANDRIA.

.....

This plant is from the Cape of Good Hope, whence it was first brought to this country about the year 1774. It trails on the ground, and seldom exceeds six inches in height, unless supported, by which means it may be considerably extended.

The flowers are very pretty; they are produced abundantly in the beginning of summer, and last a good while: occasionally perfect seeds are obtained, by which, or by cuttings, the plant is easily multiplied. The green-house protection is necessary for it in the winter: its soil should be loam, with a small admixture of peat earth.





Scilla bifolia.

G. Loddiges del.

G. Loddiges.

No. 283.

SCILLA BIFOLIA.

Class.

Order.

HEXANDRIA

MONOGYNIA.

This charming little spring plant, which often flowers in March, is a native of many parts of the continent of Europe: it has also been found in this island; notwithstanding, it may still be a matter of doubt with this, as with other bulbs found in England in an uncultivated state, whether they be truly indigenous. They are known to have been long cultivated, and the probability of their having escaped from gardens, is in some instances great: in other cases, spots which once were gardens, may, during the lapse of ages, have been forsaken, and together with the bulbs they contained, become almost wild again.

It grows very well in a common border, in almost any kind of soil, but does not thrive in a pot: it increases itself by offsets, which are freely produced. There is a white variety of it cultivated.



No. 284.

BONATEA SPECIOSA.

Class.

Order.

GYNANDRIA

MONANDRIA.

.....

This very rare plant is from the Cape of Good Hope: it flowered with us in the month of March. Our learned friend, Mr. Brown, first pointed it out to us as the Bonatea of Willdenow *Orchis speciosus* of Linnæus's supplement, under which name it has been figured by Jacquin in the *Hortus Schoenbrunensis*.

Few flowers are more remarkable in their structure, or contain more curious appendages than this. It is truly an astonishing production, deserving the minutest examination; and irresistibly commanding our utmost admiration of the skill displayed in its formation by the Infinite Creator.

The flowers, at times, are slightly fragrant; and last a considerable while. We have hitherto kept our plant in the stove, in a soil composed of sandy peat and loam. After flowering, the top decays. The root (which is a kind of tuber) does not admit of much increase.



Metrosideros speciosa.

G. C. Smith.

No. 285.

METROSIDEROS SPECIOSA.

Class.	Order.
ICOSANDRIA	MONOGYNIA.

.....

This showy plant is a native of New South Wales ; it was introduced about the year 1812. Its rich and splendid flowers are in perfection in the beginning of summer, retaining their beauty for a long time. They are succeeded by seeds, which are at least two years ripening. By these, as well as by cuttings, we have been enabled to increase it.

It is a very suitable plant for a conservatory ; as when allowed the liberty of the full ground, its spikes of flowers are larger and much more numerous than when confined in a pot.

The soil should be loam and peat : the common green-house protection is sufficient in the winter, and the plant likes rather a large allowance of water.



Pancratium amœnum.

Loddiges del.

No. 286.

PANCRATIUM AMCENUM*.

Class.

Order.

HEXANDRIA

MONOGYNIA.

.....

A native of Guiana; it has been long cultivated in the stoves of this country, of which it forms so distinguished an ornament. The season of flowering varies considerably: we have had some as early as May, and successively till November. The flowers are extremely fragrant. Soil, light sandy loam: it increases readily by offsets, which usually flower in two or three years after separating. The plant likes a pretty good heat, and will amply repay the attentive cultivator, by its superb flowers and delicious scent, which perfumes a large house from a single plant.

* Reduced to about one-fourth of the natural size.



Erica exsudans.

No. 287.

ERICA EXSUDANS.

Class.	Order.
<i>OCTANDRIA</i>	<i>MONOGYNIA</i> .

.....

This sort was raised about the year 1810 : it is a native of the Cape of Good Hope, and requires the usual protection of an airy greenhouse in the winter season. The flowers are produced in the latter part of summer.

The whole plant is covered with small glandular hairs, from which a sort of clammy fluid is constantly distilling, a property which some other heaths also possess in a greater or less degree.

It is propagated by cuttings, without much difficulty, and should be potted in sandy peat earth.



Erica fragrans.

No. 288.

ERICA FRAGRANS.

Class,	Order,
<i>OCTANDRIA</i>	<i>MONOGYNIA</i> .

.....

This is a pleasing species ; it was introduced from the Cape about 1810. The spring is the season in which it generally flowers, and the blossoms are finely scented, which is rather an unusual property in this very extensive family.

It is of low growth, becoming very bushy, and is rather apt to damp in the winter season ; for which reason it should be confined as little as possible in the greenhouse. It is propagated without much difficulty by cuttings, and loves a sandy peat soil.



Bracæna umbraculifera

No. 239.

DRACÆNA UMBRACULIFERA.

Class.	Order.
<i>HEXANDRIA</i>	<i>MONOGYNIA.</i>

.....

A native of the Mauritius; our plant, which we believe to be the only one in this country, was brought from France by Mr. Woodford, in 1802. It flowered for the first time in December 1818. The blossoms, of which there are prodigious numbers (upwards of a thousand) open thirty or forty at a time in the evening, and go off in the morning, remaining only one night expanded. They are succeeded by others, every night for a month or more, and are slightly fragrant. The head, which had grown very wide, after flowering, contracted itself again to the usual size, and finally divided into two shoots.

We have never been able to increase this stately plant. It thrives very well in a large pot in loam and peat soil. The rich deep hue of the leaves, their number and size, (the whole plant being five or six feet over,) render it a very interesting object in a large hot-house, and well adapted to range with the palms.

VOL. III.

E E



Diosma latifolia.

No. 290.

DIOSMA LATIFOLIA.

Class.

Order.

PENTANDRIA MONOGYNIA.

.....

A native of the Cape of Good Hope, introduced about the year 1789. It is a large growing sort, and will sometimes attain the height of five or six feet. The flowers are produced in the spring, in agreeable profusion, and are of pretty long duration: before they open, the buds are of a fine pink colour.

It is extremely difficult to propagate by cuttings; and as seeds have not yet been produced here, we are dependant for increase upon the precarious supplies which now and then reach us from its native country.

Being not at all tender, it needs no other protection than that of a cold greenhouse, that is just kept from freezing. The soil should be loam and peat. The leaves have a powerful smell, which is common to many of this genus.



Pultenaea paleacea.

No. 291.

PULTENÆA PALEACEA.

Class.	Order.
DECANDRIA	MONOGYNIA.

.....

This lively plant is a native of New South Wales, of late introduction : it forms a dwarf bushy shrub, flowering all over in the greatest profusion during the months of May and June. The heads usually consist of from four to six flowers, and every twig, even the smallest, is crowned with them, rendering the plant very showy.

It needs no other protection than a common greenhouse during the winter months, and flourishes in a mixture of loam and peat earth.

Sometimes the flowers are succeeded by ripe seeds. The plant may also be increased with tolerable facility by cuttings.



Epacris obtusifolia.

No. 292.

EPACRIS OBTUSIFOLIA.

Class.

Order.

PENTANDRIA

MONOGYNIA.

.....

We raised this plant from seeds received from New South Wales about the year 1804. It is a delicate sort: the branches are very slender and erect, flowering near the top in spikes of two or three inches in length, and continuing a considerable time in blossom, the usual time for which is during the months of May and June.

It must be preserved during the winter in an airy greenhouse, being subject to be injured by damp at that season: the soil should be sandy peat and the pots not too large. It may be increased by cuttings.



Mahernia grandiflora.

No. 293.

MAHERNIA GRANDIFLORA.

Class.

PENTANDRIA

Order.

PENTAGYNIA.

.....

This is a native of Africa, and was introduced many years ago into the Kew garden by Mr. Masson, but has been lost there. Mr. Burchell has since brought it home. It was found by him in great abundance, growing in sandy plains to the North of Latakoo; on which account it probably needs more warmth than that of our common greenhouse. The flowers are highly ornamental: they are produced in the month of June in great plenty. The plant may be propagated by cuttings, although with some difficulty. It is of a slender and delicate habit, and should not have too large a pot: the soil sandy loam; and it should be sparingly watered, particularly in winter.

1824.



Polygala teretifolia.

No. 294.

POLYGALA TERETIFOLIA.

Class,

Order,

DIADELPHIA

OCTANDRIA.

This was discovered by Thunberg at the Cape, and was first introduced into this country about the year 1791. It flowers during the summer months, and makes an elegant appearance, there being a beauty in its colour which is perfectly inimitable. In the winter it should be kept in the greenhouse, and is by no means tender: we have planted it against the back wall, where it thrives, and has grown about four feet high; but we have not yet been able to increase it, having tried cuttings many times in vain: the only chance is, that it may bear seed, which it does not seem at all likely to do. The soil should be loam and peat.

N° 295.



Fiumbago capensis.

Del. L. 1811.

Del. L. 1811.

No. 295.

PLUMBAGO CAPENSIS.

Class.	Order.
<i>PENTANDRIA</i>	<i>MONOGYNIA.</i>

.....

We raised this from seeds received from the Cape of Good Hope in 1818. The flowers are extremely delicate and beautiful: they appeared with us in the month of May, and in different plants were continued in succession throughout the greater part of the summer. The plant grows about two feet high; its branches are well clothed with foliage. There are two curious reniform stipules at the base of each leaf, which clasp nearly round the stem. The calyx is covered with glandular hairs, from which a clammy liquid is distilled.

We have hitherto preserved our plants in the stove; but it is probable that they may succeed in the greenhouse. They should be potted in loam and peat, and may be increased by cuttings.



Erythrina crista-galli

No. 296.

ERYTHRINA CRISTA-GALLI.

Class.	Order.
DIADELPHIA	DECANDRIA.

.....

This is a much more free and abundant flowering sort than any of this genus with which we are acquainted. Our plant, which was not three feet in height, had near thirty blossoms open at one time : they are produced three together, from the axil of each leaf. The branches are smooth, but the leaf-stalks have here and there a small crooked thorn.

This superb plant flowered with us in the month of May. It is said to have been introduced in 1771 from Brazil, a country which seems to be, if possible, more than any other, favoured by the All-bountiful Creator in the riches and splendour of its vegetable productions.

It is somewhat tender, requiring the stove at all seasons, and may be increased by cuttings : the soil should be rich mellow loam.



Aretia alpina.

No. 297.

ARETIA ALPINA.

Class.

Order.

PENTANDRIA

MONOGYNIA.

.....

This charming little plant is a native of the Alps of Switzerland: we received it in a living state in 1818, from our friend Mr. Schleicher, and it flowered the following spring, continuing for near two months in perfection.

It never exceeds one or two inches in height, and forms a very neat and proper plant for a rock. We have kept it in a pot, in loam, without any protection, but have not yet had time to increase it. It is said to have been first introduced into this country in 1775, but it has been lost for a long time, and it is not improbable at all, that it may again experience a similar fate.



Erica leana.

No, 298.

ERICA LEEANA.

Class.	Order.
<i>OCTANDRIA</i>	<i>MONOGYNIA.</i>

.....

This is a native of the Cape of Good Hope, introduced about 1788 by Mr. Mason. It received its name in honour of Mr. Lee of Hammersmith, than whom no one can be more deserving of this distinction. He has introduced and successfully cultivated vast numbers of plants, particularly of this beautiful tribe, which, for a period of nearly half a century, he has displayed in a style of unexampled prosperity.

It requires the usual mode of treatment, and may be increased (though with difficulty) by cuttings: the soil should be sandy peat, and in winter it must be preserved in the greenhouse.



Daphne oleoides.

No. 299.

DAPHNE OLEOIDES.

Class.	Order.
<i>OCTANDRIA</i>	<i>MONOGYNIA</i> .

.....

A native of the Levant, where it had been noticed a long time since by Tournefort and other early writers ; but it has been only of late introduced into this country from France.

Being easily increased by grafting upon the Mezereum, or Laureola, it is already becoming pretty general. It is not quite hardy enough to bear a cold winter ; but, in mild seasons, it stands out the whole year with safety. The flowers come out in succession for the greater part of the summer and autumn ; and the plant may be deemed a pretty addition to those hardy greenhouse shrubs which require little care or protection. The soil should be loam.



N. 300.



Stapelia geminata

No. 300.

STAPELIA GEMINATA.

Class.

Order.

PENTANDRIA

DIGYNIA.

.....

A very dwarf growing species. Its short branches usually lie pressed close to the ground, and throw out abundance of roots from their under sides, by which it is readily multiplied, as the smallest bit will make a plant. It is a native of the barren deserts north of the Cape of Good Hope, and has been cultivated now for several years in England. The period of its flowering is the latter part of summer and autumn. The flowers are pretty, but emit an odour which is peculiarly offensive. The plant should be kept in a warm greenhouse, or dry stove, during the whole year: the soil should be poor sandy loam, and kept very dry in winter.

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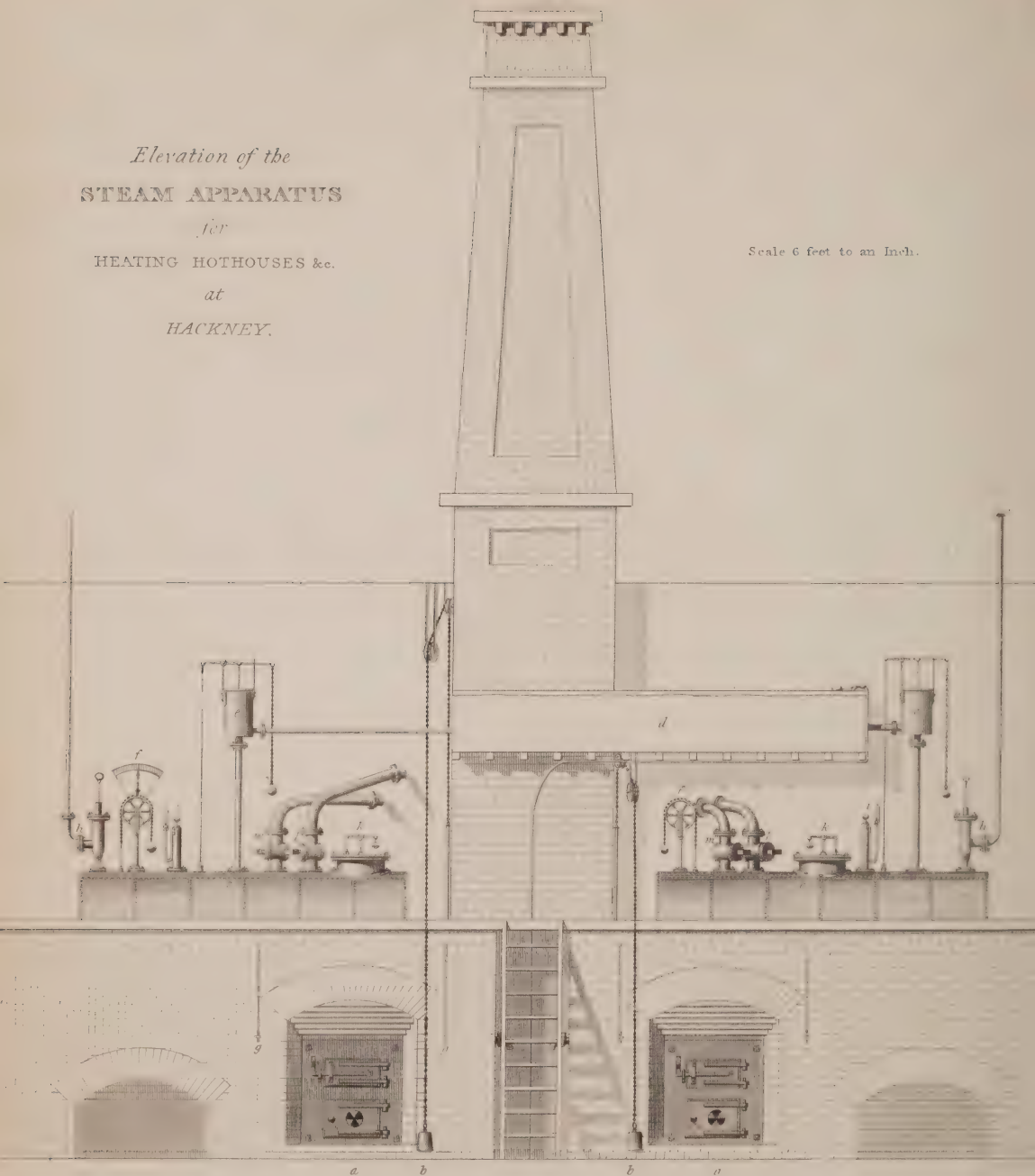
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W. Wilson, Printer, 4, Greville-Street, London. .

Elevation of the
STEAM APPARATUS
for
 HEATING HOTHOUSES &c.
at
 HACKNEY.

Scale 6 feet to an Inch.



GROUND PLAN

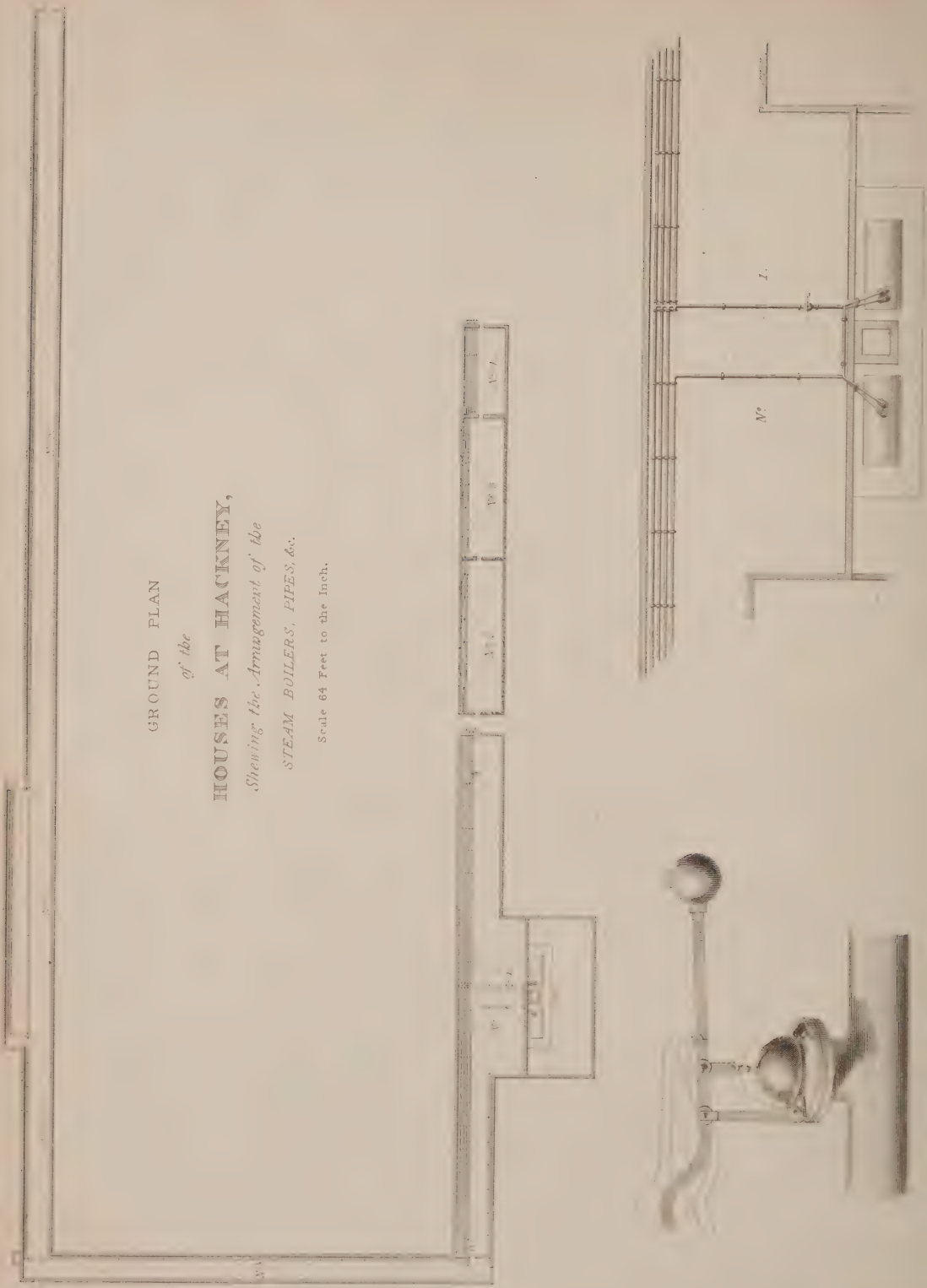
of the

HOUSES AT HACKNEY,

Shewing the Arrangement of the

STEAM BOILERS, PIPES, &c.

Scale 64 Feet to the Inch.



ON WARMING HOTHOUSES BY STEAM.

.....

Several valued friends having expressed a desire of information respecting the mode we are practising of Heating our Houses by Steam, we have been induced to draw up the following short account of the apparatus as it stands at present in full work.

It will be needful to begin at the Boilers, as being the source of action. We have two, although one only is needed, or can be used at one time; but in case of repairs being wanting, the other is always in reserve, to prevent any interruption of heat. They are both of equal size, 11 feet long, $4\frac{1}{2}$ wide, and $5\frac{1}{2}$ deep, of wrought Iron, fitted up precisely as common Steam Engine Boilers (*c c*, *Plate 1*). A Cistern above (*d*) supplies them with water in the usual way, by a self-feeding apparatus, composed of a feed head (*e*) in which is a valve, which is opened by the descent of a stone float in the boiler as fast as the water evaporates, and being balanced by a weight, the moment the water is replenished the float rises and shuts the valve.

To guard against any danger which might arise from the too great force of the Steam, a Safety Valve (*h*) is affixed: this is loaded so as to rise whenever the steam is of a greater pressure than 4lb. upon the square inch: it immediately escapes through the pipe to the outside of the building.

There is also another valve (*k*) to admit atmospheric air whenever the condensation of steam causes a vacuum in the boiler.

To denote the height of water in the boiler there is a Standard and Wheel (*f*) which is connected with a Stone Float and Balance Weight, and moves an Index, pointing out the level of the water; also for the same purpose, two Guage Cocks (*gg*) and Pipes, one on each side of the fire door: these communicate at different levels with the inside of the boiler. From that on the right hand steam should issue, if opened; and from that on the left, water.

A Mercurial Guage (*i*) shews the pressure of the steam at all times.

The Furnace (*aa*) is regulated with the greatest precision by a door to the ash pit, and a damper in the chimney; the latter is balanced by a weight (*bb*) descending by a chain over two pullies near the fire door, and can be opened or shut in a moment.

By a brass cock at the lowest part of the boiler, the water can be let out, for the purpose of cleaning it, which should be done every two or three months.

We proceed now to describe the arrangement of the pipes. The number of these is of course proportioned to the degree of heat required and the space it has to fill. In the Large Stove (*No 1, Plate 2*) which is 200 feet long, and contains above 30,000 cubic feet, four tiers are laid the whole length in the front; with these the heat is quickly raised to 80° or 90°. Westward the warm greenhouses, *No. 2* and *3*, have each two tiers, and beyond those the small stove, *No. 4*, has five. Eastward *No 5, 6*, and *8*, have one, but *No 7*, being so much wider and higher, has three.

The whole are divided into two separate mains, which for the sake of distinction, we may call the Eastern and the Western. Each has its separate Cock (*ll, mm, Plate 1*) on the boiler, and these cor-

responding on both boilers, act precisely in the same manner, whichever may be in use.

When the fire is lighted, these are both shut, and remain so till the steam is at its full pressure of 4lb. to the inch, shown by the guage. At that time the Western main is opened, by turning the Cock (*l*), the vents at the end of each tier of pipes being previously opened: these are to be shut again as soon as steam issues from them. The aggregate length of the pipes attached to this main is about 450 yards. In temperate weather this is all the heat we require, as it supplies the stoves and warm greenhouses, but in frost, the Eastern main, which supplies the cold greenhouses, (No. 5, 6, 7, 8,) must be brought into action, which is done thus:—When the Western has been well heated, which may take perhaps half an hour, it is turned off, and as soon as the steam in the boiler has recovered its full pressure, the Eastern cock (*m*) is opened: this fills all the greenhouses down to the extreme end: the length of this division is about 820 feet of houses, furnished with 430 yards of pipe more or less. After this has been on for half an hour it is shut, and the former opened again, which keeps up a heat fully sufficient for every purpose: if the weather is not very severe, we do not have the fire made till two o'clock in the afternoon, and keep it on till nine or ten at night, and no longer.

Our pipes are all iron, 4 inch bore, flanced and screwed together with bolts and nuts: the joints are made with iron cement, some upon lead flanches, and some upon millboard dipped in white lead: the latter way is perhaps the closest and best. They rest upon wooden supporters, between which and the pipe are small iron rollers, to prevent friction by the

expansion and contraction of the metal as it warms and cools.

A slight inclination is necessary in laying them, about 1 inch in 12 feet, to take off the condensed water to the ends, where it is let out by the vents.

We have three large Copper Valves, (*a a a, Pl. 2.*) one in the middle and one at each end of the great stove; they are for the purpose of letting out steam. These are fixed on the pipes, and are capable of filling the house with vapour in an instant; thereby greatly increasing the heat, and producing a fine dew all over the plants. A representation of one of these is given (*Plate, 2, fig. 2.*) By turning over the ball the valve rises and opens the whole bore of the pipe, as shown in the dotted line.

Perhaps it may not be amiss to state some of the motives which induced us to adopt the above plan: to do this it will be necessary to take a slight retrospect of the state of cultivation of Tropical plants in England during the last twenty-five years, which may without much impropriety be termed the period of the decline, if not the fall, of that interesting pursuit.

Several causes have contributed to bring hot-houses into neglect: of these, undoubtedly the pressure of the times has been one, but perhaps by no means the greatest, as during the same lapse of time other propensities, vastly more expensive in their nature, and capable of affording far less real pleasure, have rapidly increased and are still increasing.

The want of a place where some of the fine productions of the Tropics may be seen unfolding their majestic forms, so different from the unassisted growth of our island, has been one cause of the indifference with which they have been treated. It is

no wonder that persons who have never seen more of the astonishing works of nature, than such as are displayed at a London entertainment, or are exposed for sale in Covent-Garden market, should feel little desire after such things. It is natural, under such circumstances, to suppose that the cultivation of plants is an object unworthy the consideration of any but the vulgar; an object which must necessarily be degrading, if not dishonourable, to the polished mind.

Another cause has been the difficulty, not to say impracticability, of forming a stove of a proper magnitude, and at the same time of keeping up a sufficient temperature at all times, to cause the plants to flourish. The want of this has been in many instances joined to the neglect of gardeners, who in general do not like stove plants, on account of the additional trouble they give by the old system of management.

For many years have we beheld with the deepest concern these and other causes gradually operating, to the breaking up of the several respectable collections which formerly existed in the vicinity of the metropolis. One by one have they fallen, and new ones have not arisen in their stead. The buildings which once, filled with rare and splendid plants, delighted and elevated the mind, in not a few instances have been degraded into absolute potageries. The intellectual pleasures which their owners had formerly enjoyed in them were forgotten, and exchanged for the gratification of gross and corporeal animal cravings. And thus stoves were finally doomed to exist only as a sort of manufactories of such things as early potatoes, French beans, small salad, or mushroom-rooms.

Under these discouraging circumstances, a prudent adherence to our immediate interest would perhaps have inclined us to submit to the power of example and fashion, and thus to have relinquished this (certainly ill paid) branch of cultivation for ever. But it always was a favourite branch with us, and we felt disposed to make many sacrifices, rather than abandon it. We have even thought that as others neglected it, so much the more was it incumbent upon us to be strenuous in its support. Every collection which was dispersed was thus made, by numerous purchases, to increase our own, and we no sooner perceived the advantages of steam than we prepared to avail ourselves of them to the fullest extent.

To take a comparative view of its superiority over the old way of heating by smoke flues, would fill a volume. Suffice it to say, that with it we have not found the least need of tan, of course that article is entirely dispensed with, whereby a vast deal of trouble is saved, as also a considerable expence: the risk too of losing many tender plants, which frequently happened in turning the tan in winter, is effectually obviated.

It is known that steam does not consume or destroy the vital principle of the air, as flues invariably do, thereby rendering it unfit for vegetation: on the contrary, the heat obtained from steam is regular, nutritious, and congenial to all plants: it is also far more salubrious and pleasant to the human lungs than any other artificial heat whatever, being quite free from all carbonic or other noxious effluvia, inseparable from the old method. In short, it as far surpasses all the former modes of obtaining heat, as a well-constructed Pine stove does the "bancke of new horse dung,

covered with hoops and poles," which poor old Gerarde used in his day, "wherein to set whatsoever strange seedes were brought unto him from the Indies or any other hot region."

By the use of Steam, the largest conservatories may with the greatest ease and certainty be constructed and kept to any degree of heat. Thus may the glorious works of the Almighty be displayed in some portion of the magnificence of the Torrid Zone, and those plants which are usually kept in a starved and mutilated state, may be viewed displaying their choicest beauties to the wondering eye of the beholder, and electrifying his mind with the noblest ideas of Oriental grandeur.

Nor to the productions of Tropical climates would these advantages be confined: they are equally suitable to the elegant natives of more temperate latitudes. What a rich and imposing Vista would be formed by a single row on the right hand, and another on the left, of the plants of New Holland, The Cape, China, and similar countries, growing in the full ground, and flourishing in more than native perfection? There too the Ericas, that charming ever-flowering family, might surely be seen in splendour never before equalled or imagined. Such a conservatory of a thousand yards in length, of suitable height and breadth, could be heated with ease by one of our boilers: and where in the whole world would there be such an enchanting sight? where such a display of the wonders of Creating Wisdom and Goodness? Where such an opportunity of admiring and adoring the all-bountiful Creator, and elevating the mind above itself in gratitude and praise?

How diminished, how trifling, how childish, before

such a scene, appear the enjoyments of some persons, who in thoughtless and momentary follies, which cannot possibly give either satisfaction or delight, waste in one short year, more than would be sufficient to construct and fill several such edifices.

Few people, however, are aware of the real pleasure they are throwing away by their inattention and neglect of the vegetable world,—that invaluable part of the creation, a part confessedly formed to expand the mind and to cheer the heart. When we view it in this light, it makes us truly thankful to our Heavenly Father for His unbounded beneficence in thus providing us a perpetual spring of amusement, of health, and of happiness, so suitable to rational creatures.

To despise such a favour must be in the highest degree disrespectful; far rather, surely, ought we to improve and cherish it to the utmost of our ability; nor shall one single or one weak endeavour to this end be lost. The variety of subjects already known seems to be inexhaustible: this nevertheless does not yet perhaps comprehend the half of what are really existing in the globe. Every one of these possesses innate perfections and beauties peculiar to itself, which are worthy our attentive examination, and capable of exciting our growing admiration!! “O Lord! how manifold are Thy works; in wisdom hast Thou made them all: the earth is full of Thy riches.”

B.P.L. Bindery.
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